

# MENTAL HEALTH

**In Technology Companies**

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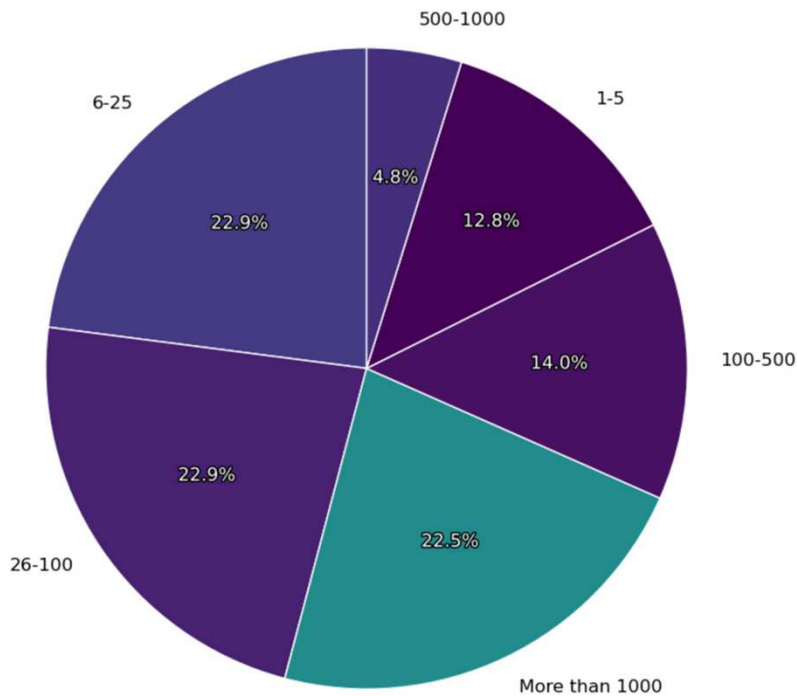


# PREVALENCES AND DEMOGRAPHICS



# Technology Companies: Size and Location

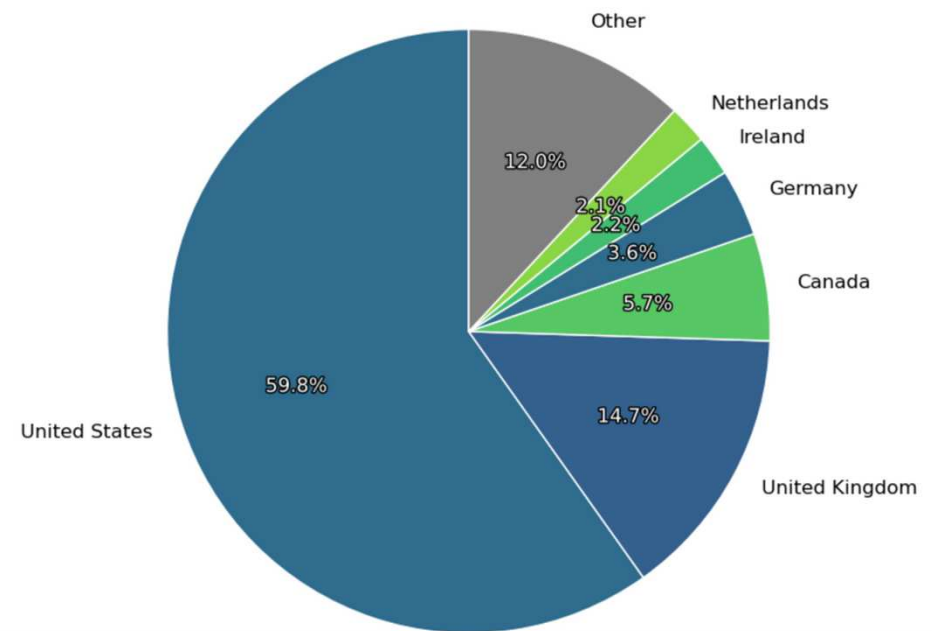
Distribution of number of employees



- Consider size of companies to gain background knowledge of respondents
- Size will reflect an employee's experiences in their work environments

- Majority United States based tech companies
- Addition top 5 countries of the survey who happen to be leading countries with technological expertise
- Work culture

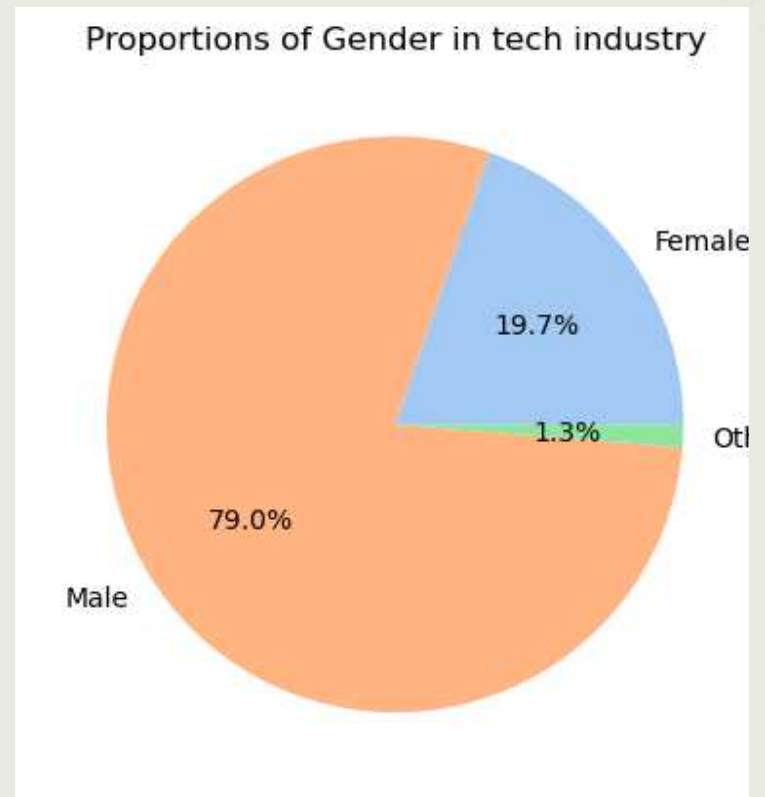
Distribution of Country





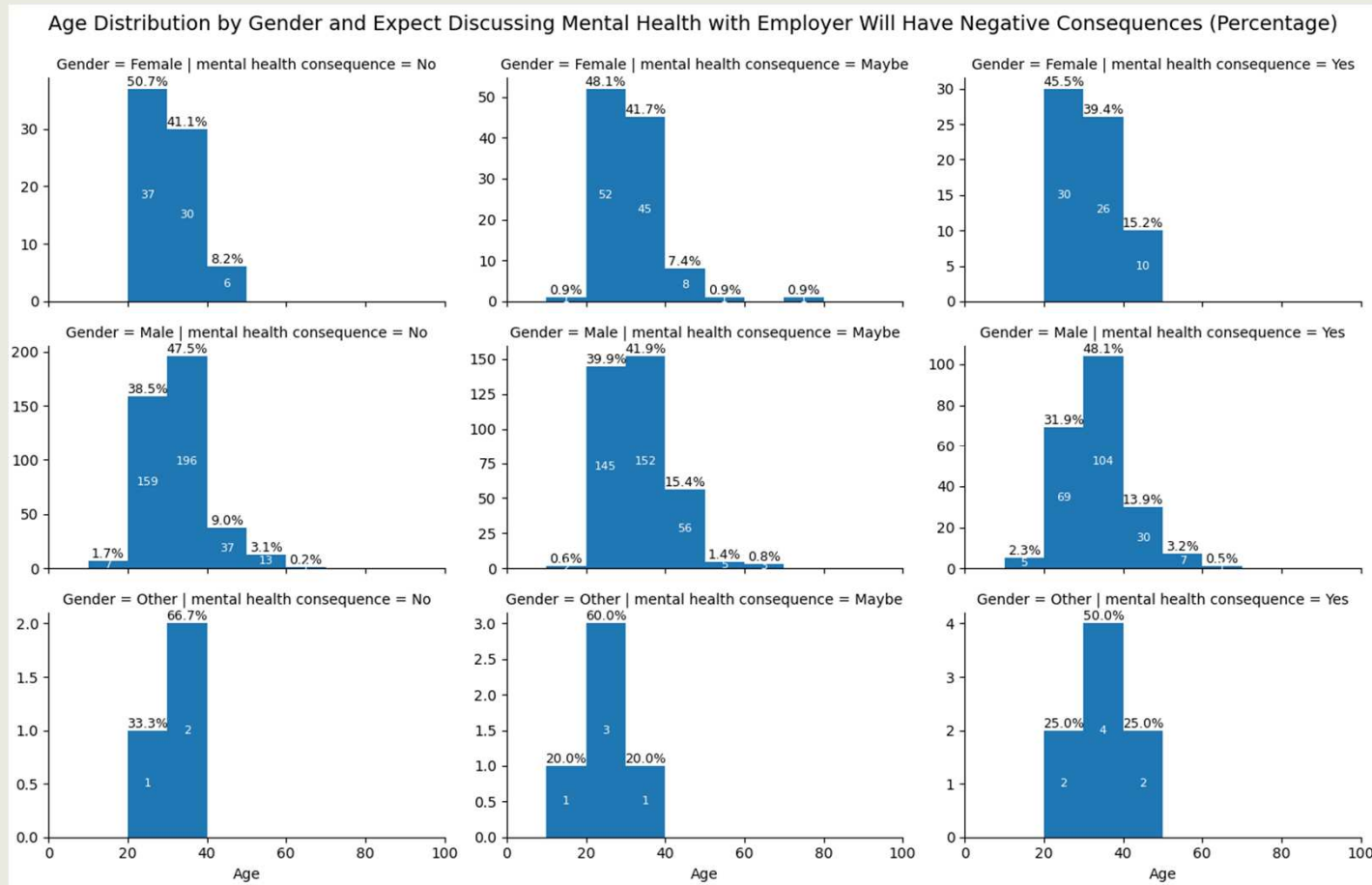
# GENDER DISTRIBUTION IN TECH INDUSTRY

- This plot focuses on how many individuals of each gender report experiencing mental health consequences. It helps in understanding if certain genders are more affected by mental health issues in the tech industry.
- It shows the overall proportions of different gender identities within the tech industry, providing a baseline for understanding gender representation in the dataset.
- Plot Details: A pie chart is created using the `data_df.groupby(['Gender']).size()` command. The `autopct='%1.1f%%'` parameter displays each slice's percentage, and colors assigns a unique color to each gender category.





# AGE OF INDIVIDUALS



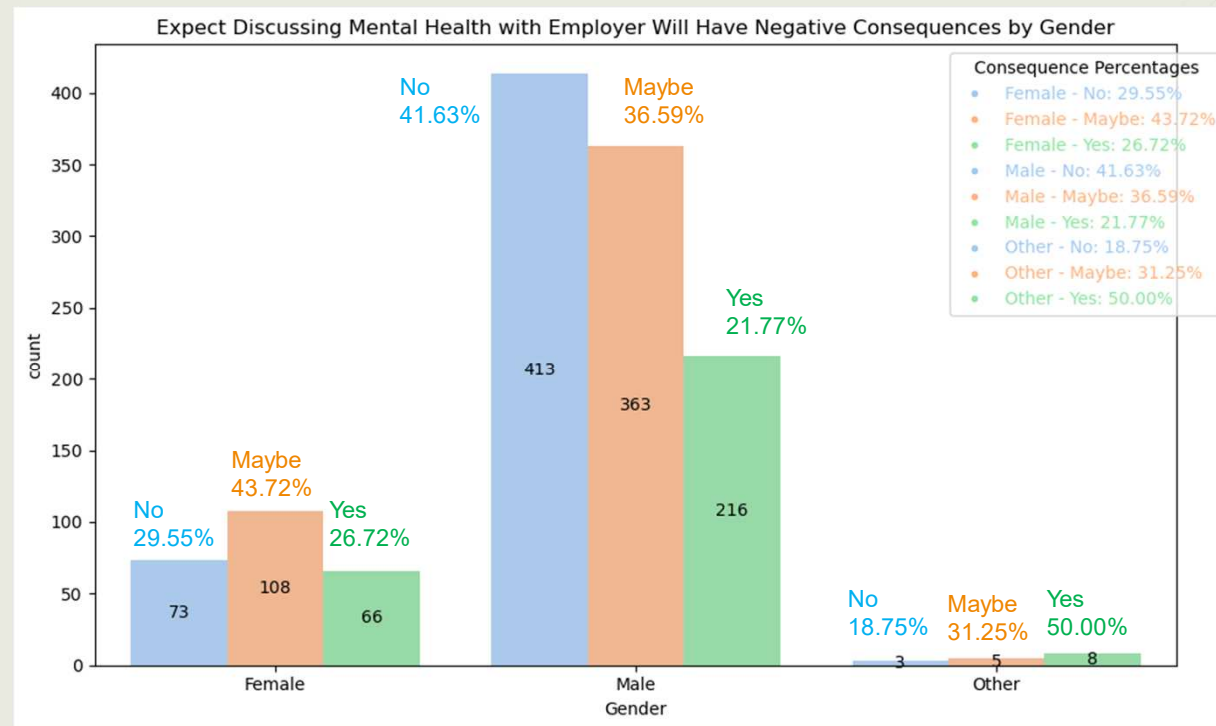
- Majority of age group 20 to 40 years olds
- Age ranges working in the technology industry
- Differences in generations awareness



# IMPACT OF GENDER

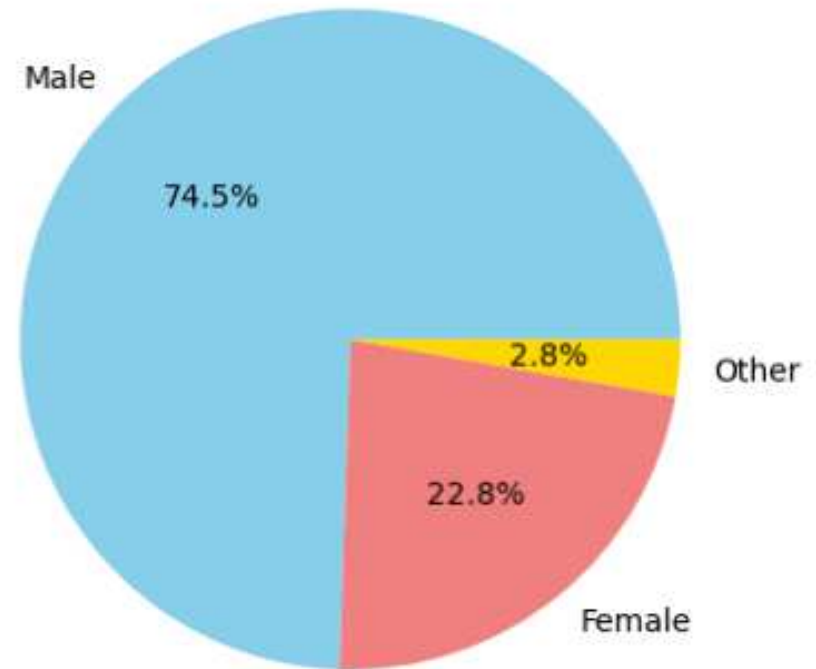
# ▶ EXPECT DISCUSSING MENTAL HEALTH WITH EMPLOYER WILL HAVE NEGATIVE CONSEQUENCES BY GENDER

- Gender reduction to male, female and other to allow for gender inclusivity
- Males dominated the tech industry
- Results of having males as a majority in the survey
- Genders who is most affected by mental health issues
- Percentages provide a better understanding of the underlying issues mental issues have caused within the three gender categories



## ▶ EXPECT DISCUSSING MENTAL HEALTH WITH EMPLOYER WILL HAVE NEGATIVE CONSEQUENCES BY GENDER

- This plot focuses on the percent of respondents of each gender expect that discussing their mental health with their employer will have negative consequences. It shows that males are more than three times more willing to discuss their mental health with their employer than females.
- Plot Details: The script creates subsets for each gender who reported “Yes” in the mental health consequence column, indicating they experienced a mental health consequence. Counts for each subset are stored in the sizes list, and a pie chart shows the proportion of affected individuals by gender.

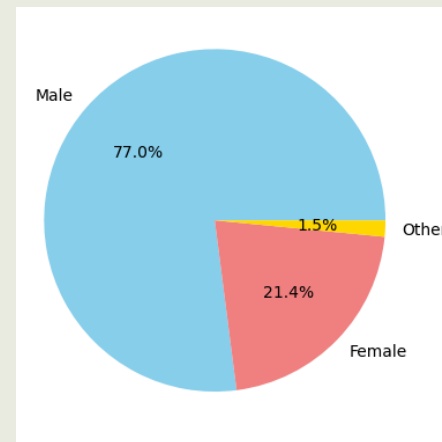




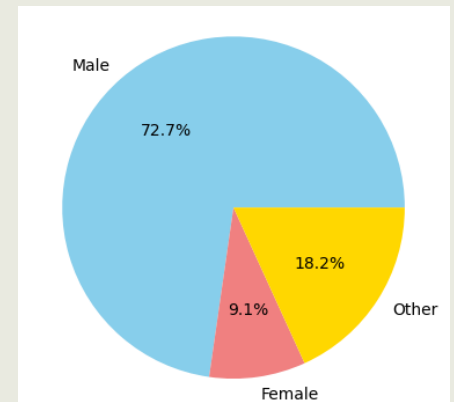
## ▶ EXPECT DISCUSSING MENTAL HEALTH WILL HAVE NEGATIVE CONSEQUENCES

These plots show how gender influences the likelihood of discussing mental health issues with a supervisor or coworkers though discussing mental health may have negative consequences. It indicates how about 75% of males are willing to discuss mental health with both their supervisor and coworkers, under the same circumstances, females are much less likely to talk about their mental health with their coworkers than they are like to talk about their mental health with their supervisor.

Though Willing to Discuss With Supervisor



Though Willing to Discuss With Coworkers





# WORK-RELATED FACTORS



# WELLNESS PROGRAM EFFECTIVENESS

## Treatment Distribution

- Visualized as count plots for each wellness program.
- High treatment rates suggest program effectiveness.
- Low rates highlight barriers or lack of engagement.

## Treatment Percentages

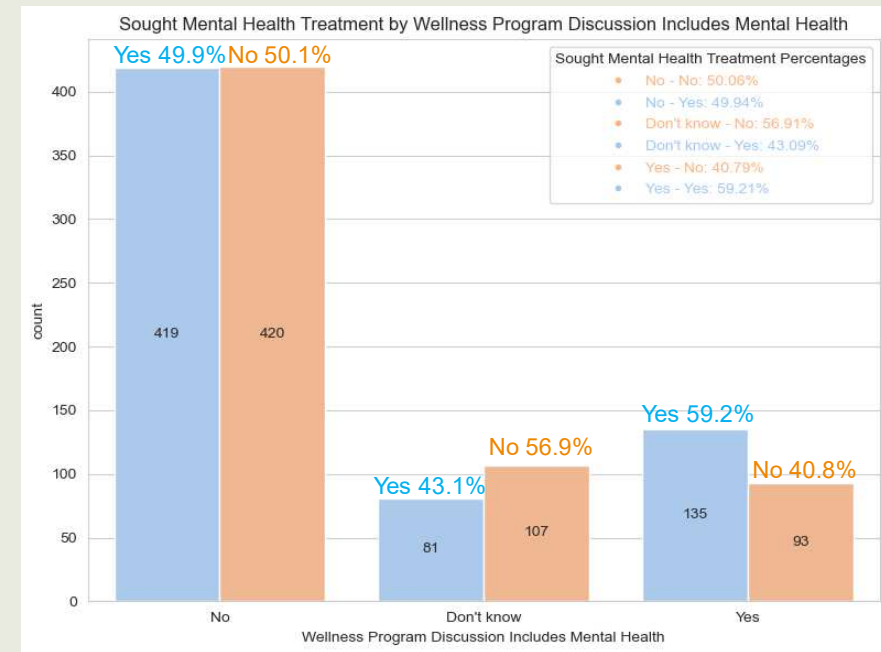
- **High percentages:** Effective in addressing mental health needs.
- **Low percentages:** Indicate gaps in accessibility or relevance.

## Statistical Insights

- Chi-squared tests determine if differences are significant.
- Results inform decisions to refine or scale programs.

## Data Limitations

- **Participation Bias:** Non-participants excluded.
- **Self-Reporting Bias:** Potential inaccuracies.
- **External Influences:** Quality, awareness, and workplace culture



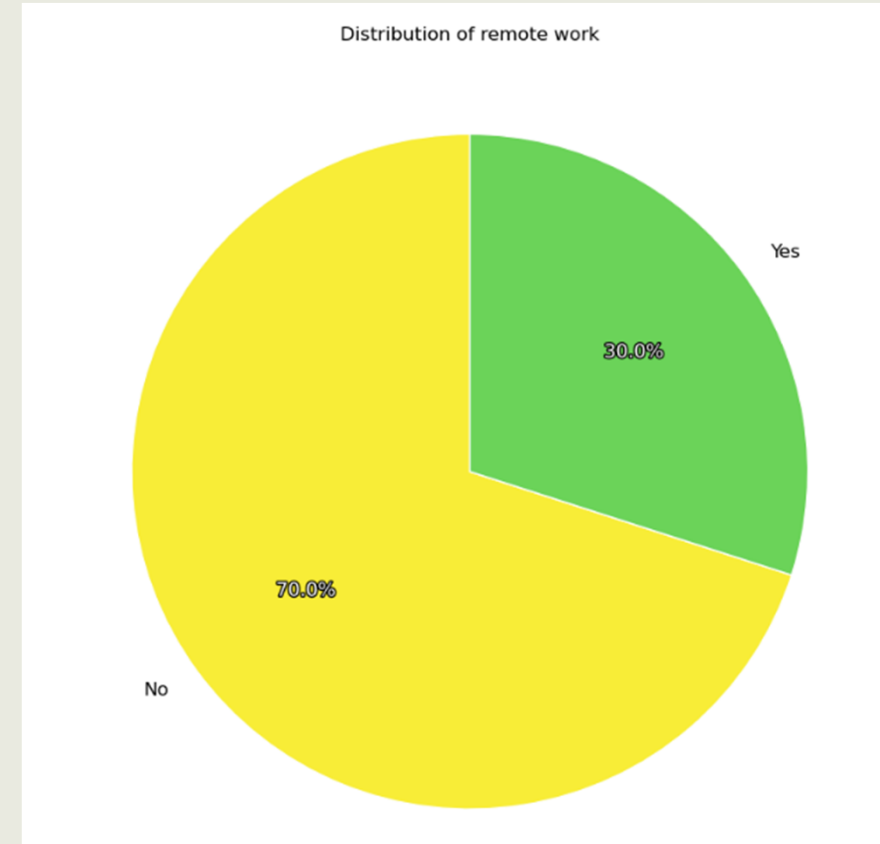


# REMOTE WORK

30% of employees worked remotely; 70% did not.

## Potential Impact:

- Flexibility of remote work can be beneficial.
- Risk of isolation and burnout due to limited boundary setting.





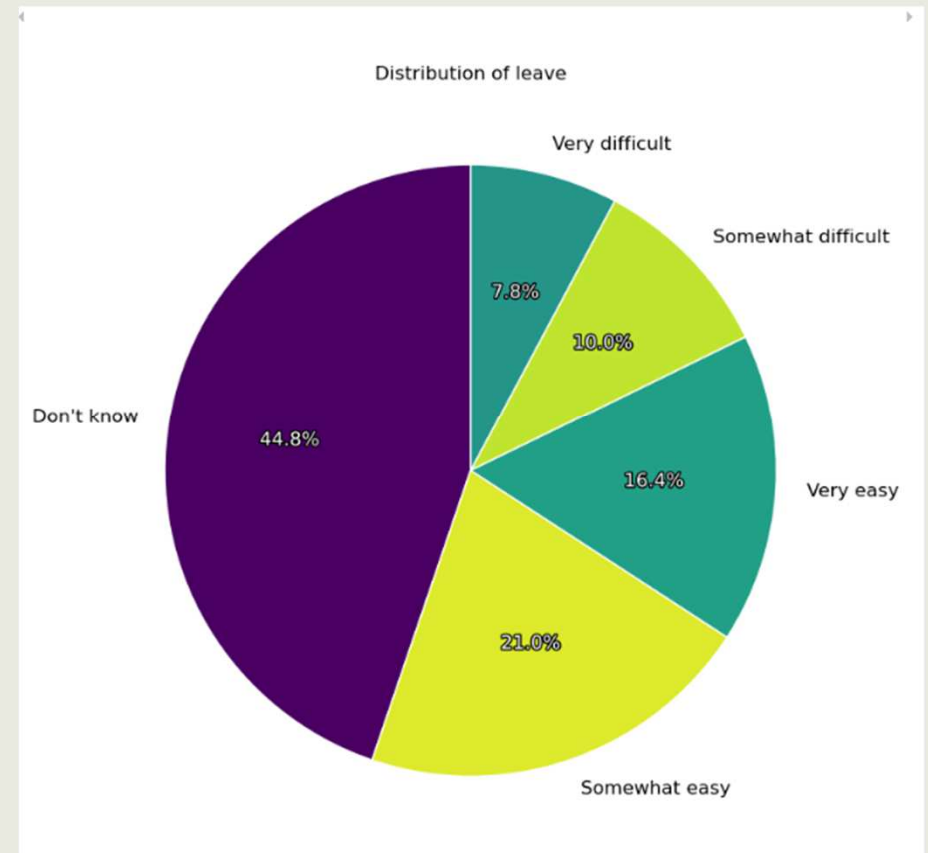
## EASE OF TAKING LEAVE

44.8% of employees were unsure about leave policies.

Only 16.4% found it "very easy" to take leave.

### Potential Impact:

- Uncertainty may discourage taking time off for recovery.
- Can lead to prolonged work periods without adequate breaks.



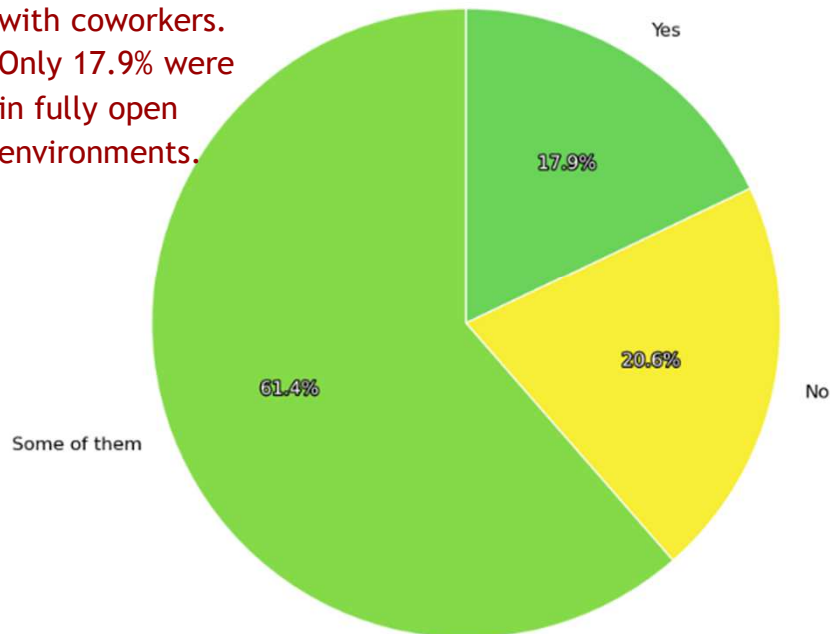


# OPENNESS TO DISCUSSING MENTAL HEALTH WITH COWORKERS AND SUPERVISORS

## Co-workers:

- 61.4% had partial openness about mental health with coworkers.
- Only 17.9% were in fully open environments.

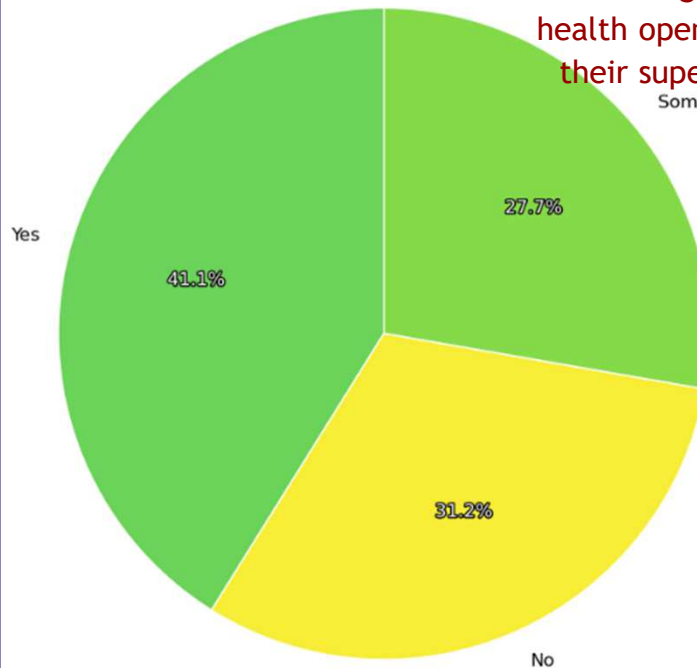
Distribution of coworkers



## Supervisors:

- 41.1% of employees felt comfortable discussing mental health openly with their supervisors.

Distribution of supervisor





# OPENNESS TO DISCUSSING MENTAL HEALTH WITH COWORKERS AND WITH SUPERVISORS

## Potential Impact:

- Limited openness may hinder support-seeking.
- Positive openness can create a more supportive environment.

## Regression Line Equation:

$$y = 0.42x + 0.51$$

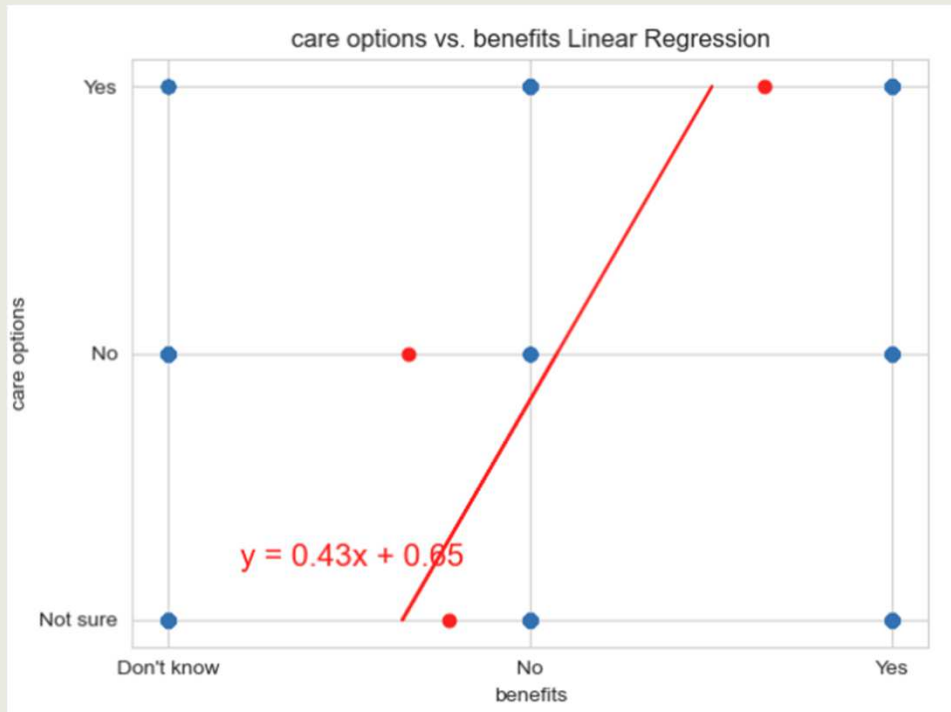
- **Slope (0.42):** Positive association between coworker and supervisor awareness.
  - Indicates that as coworker awareness increases, supervisor awareness also tends to increase.
- **Intercept (0.51):** Predicted moderate level of supervisor awareness when coworker awareness is minimal.

**R-squared = 0.33 (weak positive correlation)**



# ► AVAILABILITY OF MENTAL HEALTH CARE OPTIONS AS A FUNCTION OF AVAILABILITY OF MENTAL HEALTH BENEFITS

R-squared = 0.20 (weak positive correlation)



## Key Insights:

- Availability of mental health benefits is positively associated with knowledge of available mental health care options.

## Potential Impact:

- Shows that mental health benefits availability are positively associated with the availability of mental health care options.
- Reinforces the value of offering comprehensive benefits that include mental health support.



# ► AVAILABILITY OF MENTAL HEALTH BENEFITS AS A FUNCTION OF INFORMATION ABOUT SEEKING MENTAL HEALTH HELP

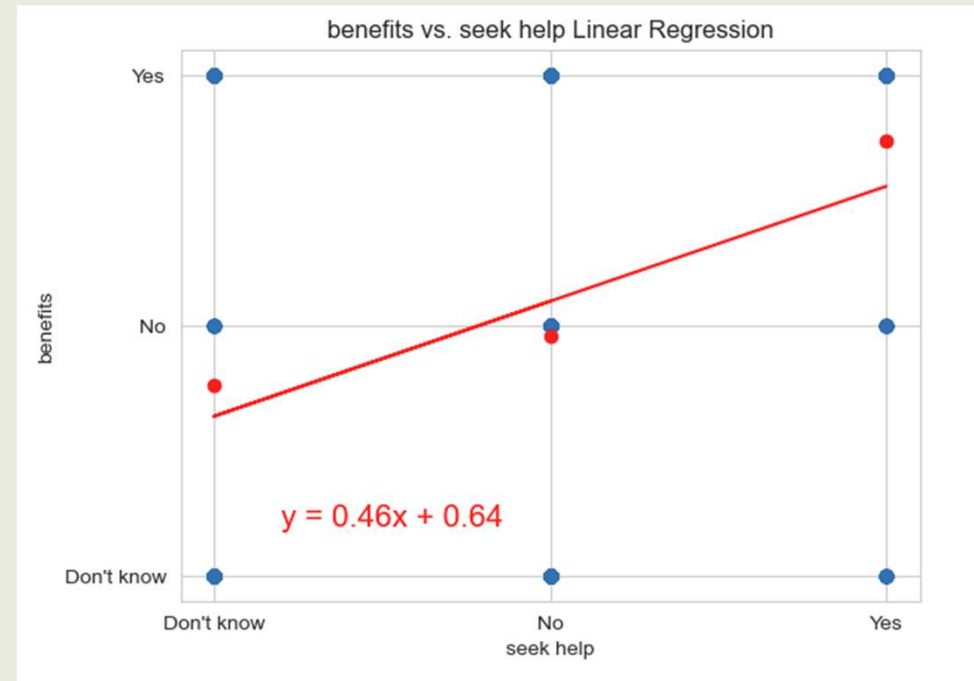
R-squared = 0.22 (weak positive correlation)

## Key Insights:

- There is a positive correlation between the availability of mental health benefits and the availability of information about seeking mental health help.
- Indicates that if mental health benefits are available then there is information about seeking mental health help and vice versa

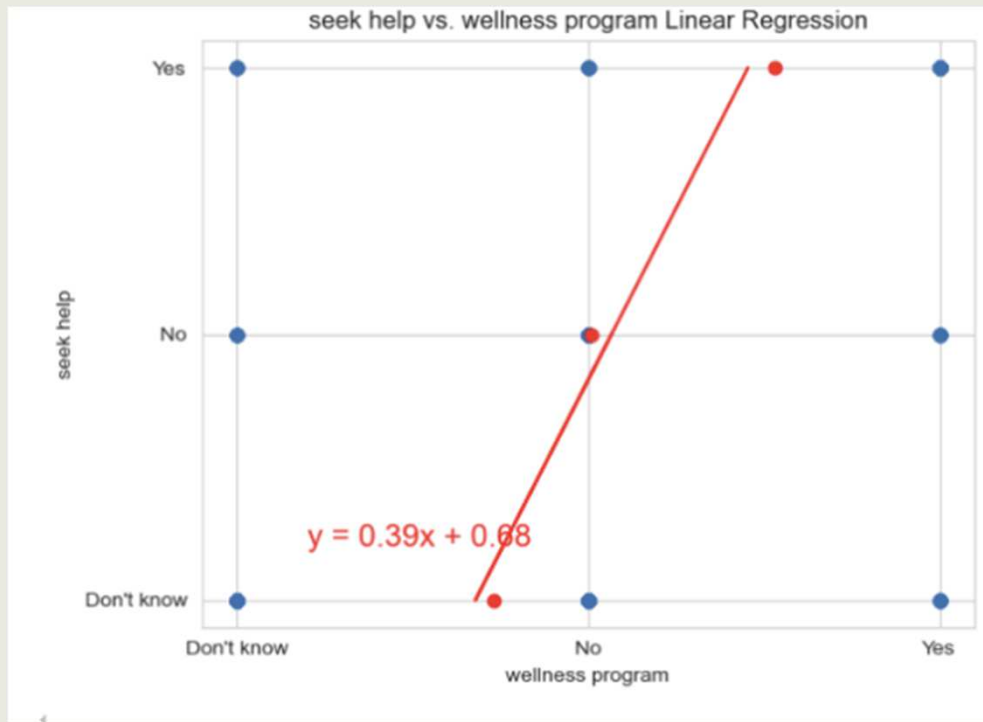
## Potential Impact:

- Highlights that mental health benefits and information about mental health benefits go hand-in-hand.
- Shows that even a modest increase in the availability of mental health information can positively influence the availability of mental health benefits.



# ▶ AVAILABILITY OF INFORMATION ABOUT SEEKING MENTAL HEALTH HELP AS A FUNCTION OF WELLNESS PROGRAM DISCUSSION INCLUDES MENTAL HEALTH

R-squared = 0.22 (weak positive correlation)



## Key Insights:

- The availability of information about seeking mental health is positively correlated with wellness program discussions including mental health
- The inclusion of mental health in wellness program discussions positively influence the availability of information about seeking mental health

## Potential Impact:

- Including information about mental health in wellness discussion increases the availability of information about seeking mental health



# **MENTAL HEALTH IN TECH BY COUNTRY**

# TABLE OF MEAN FEATURE SCORES BY COUNTRY

- Three features are compared among the eight countries with the largest numbers of survey respondents
- The Netherlands and Switzerland have low mean scores for the three features examined (No or Never)
- Australia and Ireland have high mean scores for the three features examined (Yes or Often)
- Mental Health Work Interference tend to have high mean scores (Yes or Often) and Expect Discussing Mental Health With Employer tend to have low mean scores (No or Never)
- Mean scores for countries not highlighted in orange have marginal reliability due to few respondents

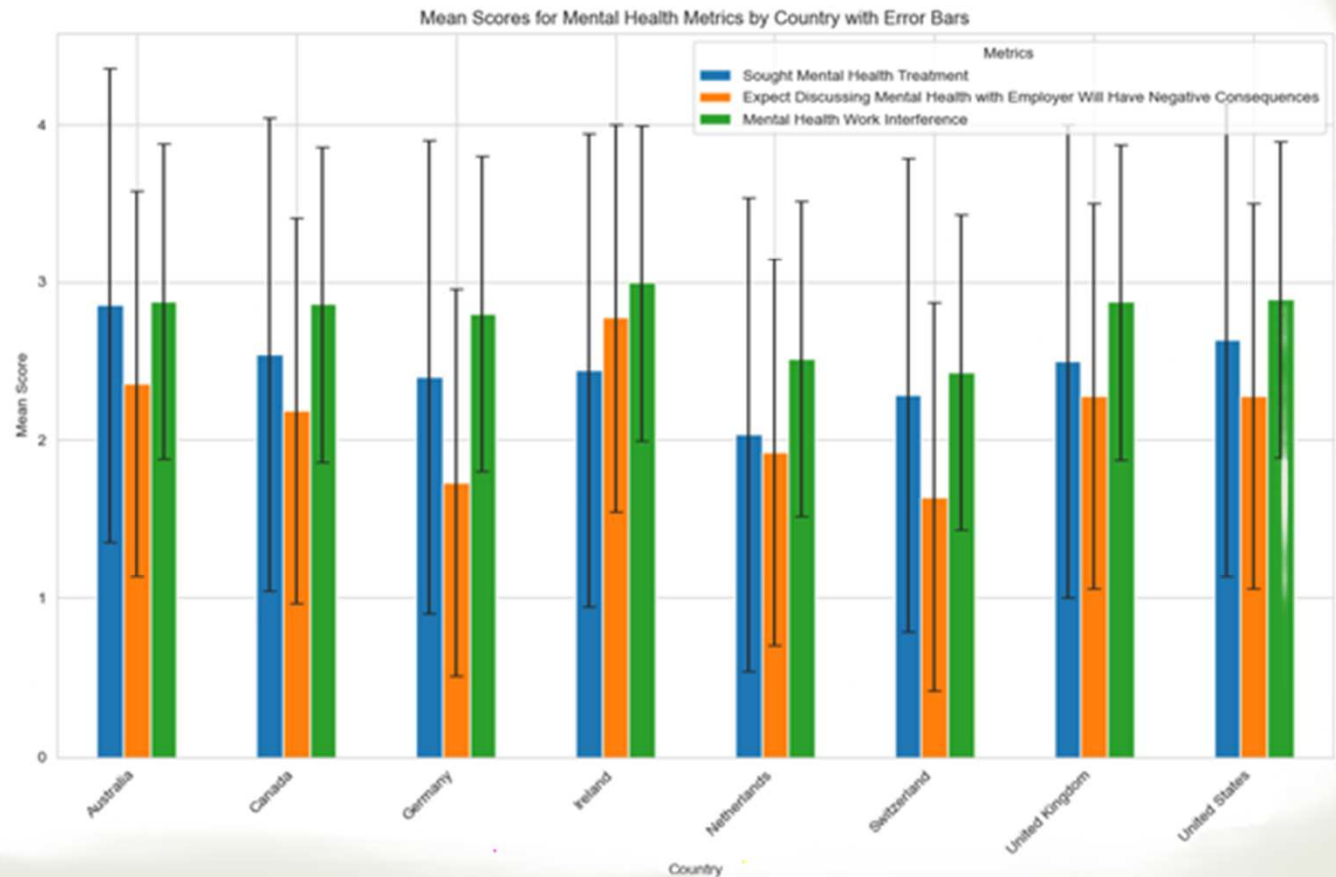
Mean Scores for Mental Health Metrics by Country			
Country	Sought Mental Health Treatment	Expect Discussing Mental Health with Employer Will Have Negative Consequences	Mental Health Work Interference
Australia	2.857	2.358	2.881
Canada	2.542	2.187	2.861
Germany	2.401	1.734	2.801
Ireland	2.443	2.775	2.997
Netherlands	2.038	1.924	2.516
Switzerland	2.287	1.644	2.431
United Kingdom	2.500	2.280	2.876
United States	2.638	2.283	2.892
Overall Mean	2.463	2.148	2.782
Overall Std Dev	0.242	0.368	0.199

Yes or Often = 4  
 Sometimes = 3  
 Maybe or Other = 2.5  
 No or Never = 1

High outlier  
 Low outlier  
 Five countries with the greatest numbers of respondents

## ► PLOT OF MEAN FEATURE SCORES BY COUNTRY

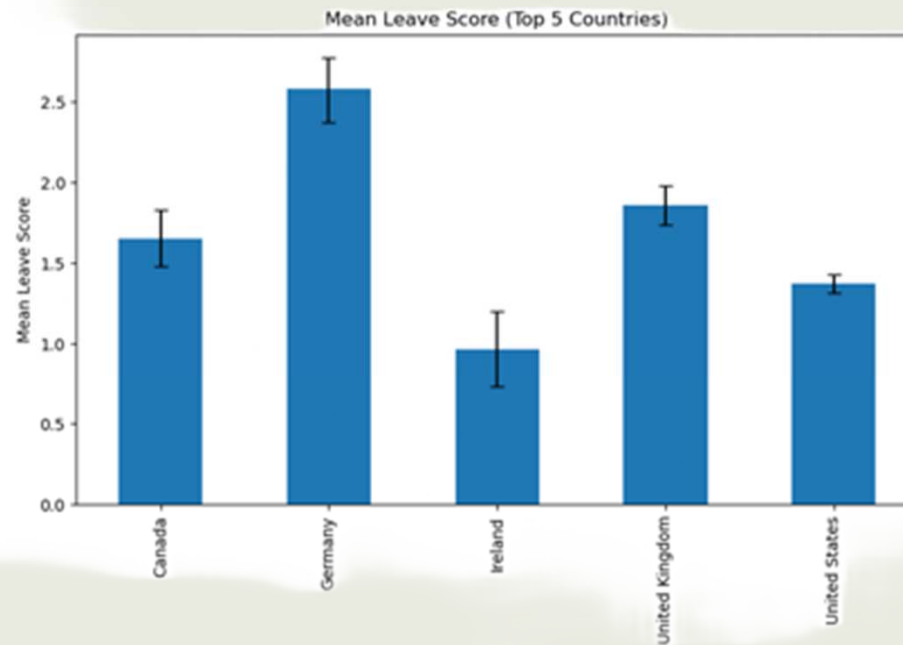
- This plot is derived from the data in the table on the last slide.
- The error bars indicate that there is no statistically significant difference btw. the bars plotted.
- For seven of the countries, there is a consistent pattern among the bars where: Mental Health Work Interference > Sought Mental Health Treatment > Expect Discussing Mental Health with Employer...





# PLOT OF MEAN MENTAL HEALTH WORK INTERFERENCE SCORES BY COUNTRY

- The one feature which shows differences among five countries with the largest numbers of respondents is the Ease of Taking Leave for Mental Health Score Mapping.
- German respondents noted the greatest ease for taking leave.
- Irish respondents noted the least ease for taking leave.
- The U.S. scores in the middle between Ireland and Germany.



Ease of Taking Leave for Mental Health Score Mapping

Very easy:	4
Somewhat easy:	3
Somewhat difficult:	2
Very difficult:	1
Don't know:	0





## SUMMARY: MENTAL HEALTH IN TECH AMONG COUNTRIES

- **Treatment Rates:** The "Sought Mental Health Treatment" table and accompanying bar chart reveal varying treatment rates across countries. Australia, Canada, and the United States have higher rates of individuals seeking treatment compared to other countries. The United States has the highest absolute number of respondents who have sought treatment, followed by the United Kingdom. This is likely due to a larger sample size.
- **Workplace Stigma:** Data on "Expect Discussing Mental Health with Employer Will Have Negative Consequences" suggests a significant level of concern across many countries. Germany and Switzerland, in particular, show higher percentages of respondents anticipating negative repercussions. In contrast, countries like Ireland show a higher willingness to discuss mental health with employers. This difference could be attributed to varying cultural norms and workplace policies.
- **Work Interference:** The "Mental Health Work Interference" table and visualizations highlight the prevalence of mental health impacting work productivity. Across almost all countries, a substantial portion of respondents report at least some level of interference. The United States has the highest absolute number of respondents reporting work interference. Australia and the United States show higher proportions of respondents experiencing "Often" interference. The stacked bar chart provides granular detail on the different levels of work interference.
- **Mean Scores and Standard Deviations:** The table of mean scores for each metric and country provides a consolidated overview. The "Overall Mean" row highlights the average scores across all countries, while the "Overall Std Dev" row indicates the variability within each metric. The bar chart with error bars visually represents these mean scores and standard deviations. Note the overlapping error bars suggest that the differences between countries aren't statistically significant.

*Thank you.*

The background of the slide is a light beige color. On the right side, there is a decorative graphic consisting of numerous thin, parallel green lines. These lines are arranged in a way that they appear to be receding into the distance, creating a sense of depth and movement. The lines are more densely packed on the right and become more sparse as they move towards the left.